

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): Method for isolating hydrogen sulfide from coke oven gas with subsequent recovery of elemental sulfur in a Claus plant, in which the hydrogen sulfide is removed from the coke oven gas by means of gas scrubbing, using an absorption liquid, the charged absorption liquid is regenerated and, in this connection, hydrogen sulfide that accumulates in concentrated form is passed to the Claus plant,

wherein the hydrogen sulfide is reacted with oxygen in the air, in a Claus boiler of the Claus plant, forming elemental sulfur,

wherein the process gas that leaves the Claus boiler is cooled to the temperature required for condensation of the sulfur, in a waste heat boiler, heated after the sulfur has been precipitated, and passed to a reaction oven of the Claus plant, in which sulfur compounds are converted to elemental sulfur on a catalyst, and

wherein the process gas that leaves the reaction oven is cooled to a temperature required for condensation of the sulfur, and the condensed sulfur is precipitated,

wherein the Claus plant is operated with only a single reaction oven, and wherein the reaction oven is operated in a temperature range between 200°C and ~~a working temperature of less than 250°C is set in this oven~~, and wherein the process gas that leaves the reaction oven, after precipitation of the condensed sulfur, is passed back, without further processing, into the coke oven gas to be cleaned, ahead of gas scrubbing, with a residual content of hydrogen sulfide that was not converted in the reaction oven, and wherein a boiler lined with a refractory material, lying horizontally, is used as the Claus boiler, which has a combustion chamber and a catalyst chamber having a catalyst bulk material, which follows horizontally and is delimited on both sides by gas-permeable checker bricks.

Claim 2 (Previously Presented): Method as claimed in claim 1, wherein the reaction oven is operated in a temperature range between 200°C and 230°C.

Claim 3 (Canceled).

Claim 4 (Previously Presented): Method as claimed in claim 1, wherein the waste heat boiler has a first tube bundle composed of heat exchanger tubes, through which the process gas that exits from the Claus boiler flows, wherein the waste heat boiler has a second tube bundle composed of heat exchanger tubes, through which the process gas that exits from the reaction oven flows, and wherein the tube bundles are disposed in a common steam generator chamber, in which low-tension steam is generated.

Claim 5 (Previously Presented): Method as claimed in claim 1, wherein elemental sulfur is drawn off from the waste heat boiler in liquid form.

Claim 6 (Previously Presented): Method as claimed in claim 1, wherein a partial stream is branched out of the hot process gas that leaves the Claus boiler, and mixed into the process stream that is passed to the reaction oven, to heat it.